

## *Curriculum Vitae*

### **Geoffrey Mark Jacquez**

Professor of Geography, State University of New York at Buffalo  
Adjunct Associate Professor of Environmental Health, The University of Michigan

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#### **ACADEMIC QUALIFICATIONS**

Ph.D (Ecology and Evolutionary Biology), 1989, SUNY Stony Brook, Stony Brook, New York.

Committee: Robert R. Sokal (Chair), F. James Rohlf, Akira Okubo and Neal Oden.

Dissertation Title: *Implications of spatial autocorrelation in genetic and lake chemistry data.*

M.Sc. (Natural Resource Policy, Economics and Law), 1983, The University of Michigan

Committee: Bobbi S. Low (Chair) and Stuart Marquis

Thesis Title: *Predictability, constancy and contingency: Methods for policy making.*

B.Sc. (Major – Biological Science, Minor - Computer Science), 1977, The University of Michigan

Advisor: Bobbi S. Low

#### **Employment**

1980–1981    Computer Programmer I, Zoology Department, Arizona State University  
1981–1982    Field Biologist, Lower Colorado River Project, Ehrenberg Arizona  
1984–1987    Research Assistant, Department of Ecology and Evolution, SUNY Stony Brook  
1987–1989    Research Associate, Stony Brook Research Foundation  
1990–        President, BioMedware Incorporated, Ann Arbor, Michigan  
2000–        Chair, TerraSeer Incorporated, Ann Arbor, Michigan  
2006–        Adjunct Associate Professor of Environmental Health Sciences, The University of  
Michigan  
2007-2011    Lecturer, School of Natural Resources and Environment, The University of Michigan

**PUBLICATIONS****Author Impact Factor: H-Index**

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**Citation indices**

	All	Since 2007
Citations	1841	1002
h-index	25	19
i10-index	43	36

**Refereed Journal Articles, Published and Forthcoming (Underlined author indicates post-Doc or staff member) (Listed in chronological order)**

1. Ferson S, Downey P, Klerks P, Weissburg M, Kroot I, Stewart S, **Jacquez** G, Ssemakula J, Malenky R, Anderson K. 1986. Competing Reviews, or Why do Connell and Schoener Disagree? American Naturalist. 127: 571.
2. Sokal, RR, GM **Jacquez**, MC Wooten, 1989. Spatial autocorrelation analysis of migration and selection. Genetics 121:845-55. PMID: 2721935
3. Barbujani, G, GM **Jacquez**, and L Ligi, 1990, Diversity of some gene frequencies in European and Asian populations V. Steep multilocus clines. American Journal of Human Genetics 47, 867-875. PMID: 2220827
4. Sokal, RR and GM **Jacquez**. 1991. Testing inferences about microevolutionary processes by means of spatial autocorrelation analysis. Evolution 45:152-168
5. **Jacquez**, GM 1993. Introduction to the special issue on statistics and computing in disease clustering. Statistics in Medicine, 12:1751.
6. **Jacquez**, GM 1993. The statistical description of disease clusters. Statistics in Medicine,12:1967-8. PMID: 8272675
7. **Jacquez**, GM and L Kheifets. 1993. Synthetic cancer variables and the construction of synthetic cancer risk maps. Statistics in Medicine, 12:1931-1942. PMID: 8272671
8. Sokal, RR, GM **Jacquez**, NL Oden, D DiGiovanni, AB Falsetti, E McGee, and BA Thomson. 1993. Genetic relationships of European populations reflect their ethnohistorical affinities. American Journal of Physical Anthropology 91:55-70. PMID: 8512054
9. **Jacquez**, GM. 1994. Cuzick and Edwards test when exact locations are unknown. American Journal of Epidemiology 140:58-64. PMID: 8017404

10. **Jacquez**, GM, Ziskowski, J; Rohlf, FJ. 1994. Criteria for the evaluation of alternative environmental monitoring variables: theory and an application using winter flounder (*Pleuronectes americanus*) and Dover sole (*Microstomus pacificus*). *Environmental Monitoring and Assessment*. 30(3): 275-290.
11. **Jacquez** GM. 1995. The map comparison problem: Tests for the overlap of geographic boundaries. *Statistics in Medicine*, 14:2343-2361. PMID: 8711274
12. Waller LA and GM **Jacquez**, 1995. Disease models implicit in statistical tests of disease clustering. *Epidemiology* 6:584-590. PMID: 8589088
13. Fortin, MJ, P Drapeau and GM **Jacquez**. 1996. Statistics to assess spatial relationships between ecological boundaries. *Oikos* 77:51-60
14. **Jacquez**, GM, R Grimson, L Waller and D Wartenberg. 1996. The analysis of disease clusters Part 2: Introduction to techniques. *Infection Control and Hospital Epidemiology*, 17:385-397. PMID: 8805074
15. **Jacquez**, GM, L Waller, R Grimson and D Wartenberg. 1996. The analysis of disease clusters Part 1: State of the art. *Infection Control and Hospital Epidemiology*, 17:319-327. PMID: 8727621
16. **Jacquez**, GM 1996. Statistical software for the clustering of health events. *Statistics in Medicine*, 15:951-952. PMID: 8861165
17. Oden, NL, GM **Jacquez** and R Grimson. 1996. Realistic power simulations compare point- and area-based disease cluster tests. *Statistics in Medicine*, 15:783-806.
18. **Jacquez**, GM, 1996. Disease cluster statistics for imprecise space-time locations. *Statistics in Medicine*, 15:873-885. PMID: 8861156
19. **Jacquez**, GM, R Grimson, L Kheifets, L Waller and D Wartenberg. 1996. Introduction to the special issue on statistics and computing in disease clustering. *Statistics in Medicine*, 15: 681.
20. **Jacquez**, GM .1996. A k-nearest neighbor test for space-time interaction. *Statistics in Medicine*. 15:1934-1949. PMID: 8888486
21. **Jacquez**, GM and DT Patten. 1996. *Chesneya nubigena* on a Himalayan glacial moraine: a case of facilitation in primary succession? *Mountain Research and Development*. 16(3): 265-273.
22. **Jacquez**, GM 1999. Spatial statistics when locations are uncertain. *Annals of GIS*, 5(2):77-87
23. **Jacquez**, GM, SL Maruca and M-J. Fortin. 2000. From fields to objects: A review of geographic boundary analysis. *Journal of Geographical Systems*, 2:221-241
24. **Jacquez**, GM. 2000, Spatial analysis in epidemiology: Nascent science or a failure of GIS?, *Journal of Geographical Systems*, 2(1):91-97
25. Fortin, M-J. and GM **Jacquez**, 2000, Randomization tests and spatially auto-correlated data, *Bulletin of the Ecological Society of America*, 81 (3): 201-205
26. Koopman JS, Chick SE, **Jacquez** G. 2000. Analyzing sensitivity to model form assumptions of infection transmission system models. *Ann Epidemiol*. 2000 Oct 1;10(7):472.
27. Koopman JS, **Jacquez** G, Chick SE. 2001. "New Data and Tools for Integrating Discrete and Continuous Modeling Strategies." In *Population Health and Aging: Strengthening the Dialogue between Epidemiology and Demography*. M Weinstein, AI Hermalin, MA Stoto eds. *Annals of the New York Academy of Sciences*. 954:268-294
28. Biesele J, Foster D, **Jacquez** GM, Phair RD, Simon C. 2002. John A. Jacquez. *Mathematical BioSciences*. 180:vii-ix. John Jacquez Memorial Volume. PMID: 12387932

29. **Jacquez**, GM, WA Marcus, R Aspinall, and D **Greiling**. 2002. Exposure Assessment Using High Resolution Hyperspectral Imagery. *Journal of Geographical Systems*, 4:1-14.
30. **Maruca**, S. L. and GM **Jacquez**. 2002. Area-based tests for association between spatial patterns. *Journal of Geographical Systems* 4:69-84.
31. **Jacquez**, JA and GM **Jacquez**. 2002. Fisher's randomization test and Darwin's data: A footnote to the history of statistics. *Mathematical Biosciences* 180:23-28. PMID: 12387914
32. **Koopman**, JS, SE Chick, CP Simon, CS Riolo, G **Jacquez**. 2002. Stochastic effects on endemic infection levels of disseminating versus local contacts, *Mathematical Biosciences* 180:49-71.
33. **Liebisch**, N, GM **Jacquez**, PE. **Goovaerts** and A **Kaufmann**. 2002. "New methods to generate neutral images for spatial pattern recognition", *Lecture Notes in Computer Science*, 2478: 181-195, Springer-Verlag Berlin Heidelberg.
34. **Jacquez**, GM and DA **Greiling**. 2003. Local clustering in breast, lung and colorectal cancer in Long Island, New York. *International Journal of Health Geographics* 2: 3. PMID: 12633503
35. **Jacquez**, GM and D **Greiling**. 2003. Geographic boundaries in breast, lung and colorectal cancers in relation to exposure to air toxics in Long Island, New York. *International Journal of Health Geographics* 2:4. PMID: 12633503
36. **Goovaerts**, P and G **Jacquez**. 2004. Accounting for regional background and population size in the detection of spatial clusters and outliers using geostatistical filtering and spatial neutral models: the case of lung cancer in Long Island, New York. *International Journal of Health Geographics* 2004, 3:14. PMID: 15272930
37. **Jacquez**, GM 2004. Current practices in the spatial analysis of cancer: flies in the ointment. *International Journal of Health Geographics* 3:22. PMID: 15479473
38. **AvRuskin**, GA, GM **Jacquez**, JR **Meliker**, MJ **Slotnick**, A **Kaufmann** and JO Nriagu. 2004. Visualization and exploratory analysis of epidemiologic data using using a novel space time information system. *International Journal of Health Geographics* 3:26. PMID: 15533253
39. **Jacquez**, GM, D. **Greiling** and A **Kaufmann**. 2005. Design and Implementation of Space-Time Intelligence System for Disease Surveillance. *Journal of Geographical Systems*. 7:7-31.
40. **Meliker**, JR, MJ **Slotnick**, GA **AvRuskin**, A **Kaufmann**, GM **Jacquez** and JO Nriagu. 2005. Improving exposure assessment for environmental epidemiology: Applications of a Space-Time Information System. *Journal of Geographical Systems* 7:49-66.
41. **Goovaerts**, P and GM **Jacquez**. 2005. Detection of temporal changes in the spatial distribution of cancer rates using LISA statistics and geostatistically simulated spatial neutral models. *Journal of Geographical Systems* 7:137-159. PMID: 16710441
42. **Goovaerts**, P, **Jacquez** GM, **Greiling**, D. 2005. Exploring scale-dependent correlation between cancer mortality rates using factorial Kriging and population-weighted semivariograms. *Geographical Analysis* 7:137-159. PMID: 16915345
43. **Goovaerts**, P, GM **Jacquez** and WA Marcus. 2005. Geostatistical and Local Cluster Analysis of High Resolution Hyperspectral Imagery for Detection of Anomalies. *Remote Sensing of Environment* 95:351-367.
44. **Greiling**, DA, GM **Jacquez**, AM **Kaufmann**, and RG **Rommel**. 2005. Space time visualization and analysis in the Cancer Atlas Viewer. *Journal of Geographical Systems*. 7:67-84. PMID: 1850951

45. **Jacquez** GM, Kaufmann, J Meliker, P Goovaerts, G AvRuskin and J Nriagu. 2005. Case control clustering for residential histories. *Environmental Health: A Global Access Science Source* 4:4. PMID: 15784151
46. Goovaerts,P, G Avruskin, J Meliker, M Slotnick, G **Jacquez**, J Nriagu. 2005. Geostatistical Modeling of the Spatial Variability of Arsenic in Groundwater of Southeast Michigan. *Water Resources Research* 41 (7), W07013 10.1029.
47. **Jacquez**, GM, JR Meliker, GA AvRuskin, P Goovaerts, A Kaufmann, M Wilson, JO Nriagu. 2006. Case-control clustering for residential histories accounting for risk factors and covariates. *International Journal of Health Geographics* 5:32. PMID: 16887016
48. Meliker, JR, MJ Slotnick, GA AvRuskin, A Kaufmann, SA Fedewa, P Goovaerts, GM **Jacquez**, JO Nriagu. 2007. Individual Lifetime Exposure to Inorganic Arsenic Using a Space-Time Information System. *International Archives of Occupational and Environmental Health* 80:184-197. PMID: 16897097
49. Meliker, JR and GM **Jacquez**. 2007. Space-time clustering of case-control data with residential histories: Insights into empirical induction periods, age-specific susceptibility, and calendar year-specific effects. *Stochastic Environmental Research & Risk Assessment, Special Issue on "Medical Geography as a Science of Interdisciplinary Knowledge Synthesis under Conditions of Uncertainty."* 21(5):625-634. PMID: 18560470
50. Goovaerts, P, Meliker, JR, and GM **Jacquez**. 2007. A comparative analysis of aspatial statistics for detecting racial disparities in cancer mortality rates. *International Journal of Health Geographics* 6:32. PMID: 17650305
51. **Jacquez**, GM, J Meliker, A Kaufmann. 2007. In search of induction and latency periods: Space-time interaction accounting for residential mobility, risk factors and covariates. *International Journal of Health Geographics* 6:35. PMID: 17716380
52. AvRuskin, GA, JR Meliker and GM **Jacquez**. 2008. Using satellite derived land cover information for a multi – temporal reliability study of self-reported recall of proximity to farmland. *Journal of Exposure Science and Environmental Epidemiology*. 18(4):381-91. PMID: 17805231
53. **Jacquez**, GM, M-J Fortin and P Goovaerts. 2008. Preface to the special issue on spatial statistics for boundary and patch analysis. *Environmental and Ecological Statistics* 15(4):365-368 (Editorial).
54. **Jacquez**, GM, A Kaufmann and P Goovaerts. 2008. Boundaries, links and clusters: A new paradigm in spatial analysis? *Environmental and Ecological Statistics*. 15(4): 403–419. PMID: 2435220
55. Meliker JR, AvRuskin GA, Slotnick MJ, Goovaerts P, Schottenfeld D, **Jacquez** GM, Nriagu JO. 2008. Validity of spatial models of arsenic concentrations in private well water in southeastern Michigan. *Environmental Research* 106:42-50. PMID: 17942092
56. **Jacquez**, GM. 2009. Cluster Morphology Analysis. *Journal of Spatial and Spatio-Temporal Epidemiology* 1(1): 19–29. NIHMS:151579
57. Scribner, R., A Ackleh, B. Fitzpatrick, B Rommel, G **Jacquez** & N Simonsen. 2009. “A Systems Approach to College Drinking: Development of a Deterministic Model for Testing Alcohol Control Policies.” *Journal of Studies on Alcohol and Drugs* 70: 805-821 (Sept 2009 issue).
58. Meliker, JR. P Goovaerts, GM **Jacquez**, GA AvRuskin, G Copeland. 2009. Breast and Prostate Cancer Survival in Michigan: Can Geographic Analyses Assist in Understanding Racial Disparities? *Cancer*. 2009 May 15; 115(10): 2212–2221. PMID: 2722931

59. Meliker, JR, GM **Jacquez**, P Goovaerts, G Copeland, M Yassine. 2009, Spatial Cluster Analysis of Early Stage Breast Cancer: A Method for Public Health Practice Using Cancer Registry Data. *Cancer Causes and Control* 20(7):1061- PMID: 19219634
60. Gallagher CM, P Goovaerts, GM **Jacquez**, Y Hao, A Jemal, JR. Meliker. 2009. Racial disparities in lung cancer mortality in U.S. congressional districts, 1990-2001. *Spatial and Spatio-Temporal Epidemiology* 1(1):41-47.
61. **Jacquez** GM and R Rommel. 2009. Local indicators of geocoding accuracy (LIGA): theory and application. *International Journal of Health Geographics* 8:60 (28 October 2009). PMID: 19863795
62. Meliker, JR, MJ Slotnick, GA AvRuskin, D Schottenfeld, GM **Jacquez**, ML Wilson, P Goovaerts, A Franzblau, JO Nriagu. 2010. "Lifetime Exposure to Arsenic in Drinking Water and Bladder Cancer: A Population-Based Case-Control Study in Michigan". *Cancer Causes and Control* 21(5): 745-757, DOI: 10.1007/s10552-010-9503-z. PMID: 20084543
63. Mulatti P, U Kitron, GM **Jacquez**, A Mannelli, S Marangon. 2010. Evaluation of the risk of neighbourhood infection of H7N1 Highly Pathogenic Avian Influenza in Italy using Q-statistics. *Preventive Veterinary Medicine* 95(3-4): 267-274.
64. Meliker, JR, P Goovaerts, GM **Jacquez**, JO Nriagu. 2010. Incorporating individual-level distributions of exposure error in epidemiologic analyses: An example using arsenic in drinking water and bladder cancer. *Annals of Epidemiology* 20(10):750-8
65. **Jacquez**, G and P. Goovaerts. 2010. Editorial: The emerging role and benefits of boundary analysis in spatio-temporal epidemiology and public health. *Spatial and Spatiotemporal Epidemiology* 1(4): 197-200. <http://dx.doi.org/10.1016/j.sste.2010.09.001> NIHMS 235071.
66. **Jacquez**, G. 2010. Geographic boundary analysis in spatial and spatio-temporal epidemiology: perspective and prospects. *Spatial and Spatiotemporal Epidemiology* 1(4): 207-218. <http://dx.doi.org/10.1016/j.sste.2010.09.003> NIHMS 235363.
67. **Jacquez**, GM, M Slotnick, G AvRuskin, JR Meliker, J Nriagu, G Copeland. 2011. An Accuracy Assessment of Commercially Available Residential Histories as Compared to Survey Data. *American Journal of Epidemiology* 173(2): 236-243.
68. Rasul, J, R Rommel, GM **Jacquez**, B Fitzpatrick, A Ackleh, N Simonson, R Scribner. 2011. Heavy episodic drinking on college campuses: Does changing the legal drinking age make a difference? *Journal for the study of Alcohol and Drugs* 72: 15-23.
69. Schmiedel, S, GM **Jacquez**, M Blettner, J Schüz. 2011. Spatial clustering of leukaemia and type 1 diabetes in children in Denmark. *Cancer Causes and Control*. Published online March 25, 2011. DOI: 10.1007/s10552-011-9755-2 (In Press).
70. **Jacquez**, GM. 2012. Does geocoding positional error matter in health GIS studies? *Spatial and Spatio-Temporal Epidemiology* (In Press).
71. Goldberg, D., GM **Jacquez**. 2012. Advances in geocoding for the health sciences (Guest Editorial). *Spatial and Spatio-Temporal Epidemiology* (In Press).
72. Fitzpatrick, BG, R Scribner, AS Ackleh, J Rasul, GM **Jacquez**, N Simonsen, R Rommel. 2012. Forecasting the Effect of the Amethyst Initiative on College Drinking. *Alcoholism: Clinical and Experimental Research* (In Press).
73. Sloan, CD., GM **Jacquez**, CM Gallagher, MH Ward, R Bastrup, O Raaschou-Nielsen, JR Meliker. 2012. Performance of cancer cluster Q-statistics for case-control residential histories. *Spatial and Spatio-temporal Epidemiology* (In Press).

74. Baastrup Nordsborg, R, JR Meliker, A Kjær Ersbøll, GM **Jacquez**, O Raaschou-Nielsen. 2012. Space-time clustering of residential histories in a Danish case-control study of Non Hodgkin's Lymphoma. (Submitted).

#### **Refereed Proceedings Articles and Book Chapters**

1. **Jacquez**, GM and LA Waller. 1997. The Effect of Uncertain Locations on Disease Cluster Statistics. In *Quantifying Spatial Uncertainty in Natural Resources: Theory and Application for GIS and Remote Sensing*. (eds. HT Mowerer and RG Congalton) Arbor Press, Chelsea MI.
2. **Jacquez**, GM 1997. Medical Geography and Disease Clustering. In 1997 McGraw-Hill Yearbook on Science and Technology. McGraw-Hill, New York, pp 297-299.
3. **Jacquez**, GM and SL Maruca. 1998. "Geographic Boundary Detection". In *Proceedings of the 8th International Symposium on Spatial Data Handling*. (eds. T. K. Poiker and N. Chrisman) Int. Geographical Union
4. **Jacquez**, GM 1998. "GIS as an Enabling Technology". In *GIS and Health* (eds. T. Gatrell and M. Loytonen), Taylor and Francis, London.
5. **Jacquez**, GM and JA Jacquez. 1999. "Disease Clustering for Uncertain Locations", In *Disease Mapping and Risk Assessment for Public Health Decision Making* (eds. A. Lawson and R. Bertollini) John Wiley & Sons, London
6. Long, A, M Wilson, G **Jacquez**, and L Estberg. 1999. "The GeoMed project: GIS and spatial/temporal statistics in public health". In: *Proceedings of the International Society for Photogrammetry and Remote Sensing Volume 17 6W7*. L. Mussio, B. Crippa, and G. Forlani, eds. London: RICS Books. pp. 299-305.
7. Brown, DG, **Jacquez**, GM, Duh, J-D., Maruca, S. 2000. "Accuracy of remotely sensed estimates of landscape change using patch- and edge-based pattern statistics". In M.J.P.M. Lemmens, G. Heuvelink et al., Eds., *Spatial Accuracy 2000*, Delft University Press, Amsterdam: 75-82.
8. **Jacquez**, GM, DA Greiling, and AM Kaufmann. 2001. Spatial pattern recognition in the environmental and health sciences: a perspective. GEOIDE workshop, May 14-15, Quebec City, Canada.
9. Fortin, M-J, GM **Jacquez** and B Shipley. 2002. Computer-intensive Methods. In *Encyclopedia of Environmetrics* (Eds. A. H. El-Shaarawi and W. W. Piegorsch). John Wiley & Sons Ltd, Chichester. Vol 1 pp 399-402.
10. Goovaerts, P, Warner, A, Crabtree, B, Marcus, A and G **Jacquez**. 2003. "Detection of local anomalies in high resolution hyperspectral imagery using geostatistical filtering and local spatial statistics." *Proceedings of IEEE workshop on Advances in Techniques for Analysis of Remotely Sensed Data*, NASA Goddard Visitor Center, Greenbelt MD, October 27-28, 2003, 10 pp
11. GM **Jacquez**, G AvRuskin, E Do, H Durbeck, DA Greiling, P Goovaerts, A Kaufmann, and B Rommel. 2004. "Complex Systems Analysis using Space-Time Information Systems and Model Transition Sensitivity Analysis". In *Accuracy 2004: Proceedings of the 6th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences*.
12. P Goovaerts, G AvRuskin, J Meliker, M Slotnick, GM **Jacquez**, J Nriagu. 2004. "Modeling uncertainty about pollutant concentration and human exposure using geostatistics and a space-time information system: Application to arsenic in groundwater of Southeast Michigan." In *Accuracy 2004: Proceedings of the 6th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences*.

13. **Jacquez**, GM and KE **Jacquez**. 2005. "Case-Control Geographic Clustering for Mobile Populations: Methods for Infectious and Chronic Diseases." In Proceedings of GeoComputation 2005, Ann Arbor, MI, August 2005. (On CD).
14. **Jacquez**, GM and JR **Meliker**. 2007. Detecting space-time cancer clusters using residential histories. Proceedings of the SPIES Defense and Security Symposium, Defense Transformation and Net-Centric Systems, April 2007, Orlando. Paper No. 6578-50, Tracking No. DSS07-DS30-60.
15. **Jacquez**, GM. 2008. "Spatial Cluster Analysis". Chapter 22 In "The Handbook of Geographic Information Science", S. Fotheringham and J. Wilson (Eds.). Blackwell Publishing, pages 395-416.
16. **Jacquez**, GM and J. **Meliker**. 2009. "Case-Control Clustering for Mobile Populations". Chapter 19 In "A Handbook of Spatial Analysis", S. Fotheringham and P. Rogerson (Eds.). Sage Publications.
17. **Greiling**, DA, GM **Jacquez**, AM **Kaufmann** and RR **Rommel**. 2009. Space-time visualization and analysis in the Cancer Atlas Viewer. Chapter G.2 In Handbook of Applied Spatial Analysis: Software Tools, Methods and Applications. Eds M. Fischer and A. Getis. Springer.
18. **Meliker**, JR, MJ Slotnick, GA **AvRuskin**, A **Kaufmann**, GM **Jacquez**, JO Nriagu. 2010. "Exposure Assessment in Environmental Epidemiology", Chapter G.3 In Handbook of Applied Spatial Analysis: Software Tools, Methods and Applications. Eds M. M. Fischer and A. Getis. Springer.
19. **Jacquez**, G. M. 2010. "Space-Time Intelligence System Software for the Analysis of Complex Systems". In Handbook of Applied Spatial Analysis. Eds. M. M. Fischer and A. Getis, Springer Berlin Heidelberg: 113-124.
20. **Meliker JR**, GM **Jacquez**. 2011. "Advances in space-time technology for assessing human exposure to environmental contaminants." Environmental Modeling Research. Ed. F.Columbus. Nova Science Publishers. (In Press).
21. **Jacquez GM** and **Meliker JR**. 2011. "Exposure Reconstruction using Space-Time Information Technology." In: Nriagu JO (ed.) Encyclopedia of Environmental Health, volume 2, pp. 636–644 Burlington: Elsevier (In Press).
22. Fortin, M-J, GM **Jacquez** and B Shipley. 2012. Computer-intensive Methods. In Encyclopedia of Environmentrics (Eds. A. H. El-Shaarawi and W. W. Piegorsch). John Wiley & Sons Ltd, Chichester. (In Press, invited contribution).
23. **Jacquez GM**, J Barlow, A **Kaufmann**, G **AvRuskin**, R **Rommel**, and J **Rasul**. 2012. "Residential mobility and breast cancer in Marin County, California." Proceedings of the ICA-ISPRS Joint Workshops "Our Complex World: Representation, Analysis and Modeling", August 10-12, 2011, Simon Fraser University, Canada (Accepted).
24. **Maxwell SK**, **Rommel RG**, **Jacquez GM**, O'Neill MS. 2012. "Internet-based Heat Evaluation and Assessment Tool (I-HEAT)." In: Environmental Tracking for Public Health Surveillance, "Section 2 Transforming Remote Sensing Data into Public Health Related Information" (Eds. S Kempler).
25. **Jacquez**, GM. 2012. "Spatial clustering and autocorrelation in health events" In Springer Handbook of Regional Science (Eds. Peter Congdon, Manfred Fischer and Peter Nijkamp), Springer (In Press).
26. Goldberg, D, GM **Jacquez**, N Mullans. 2012. "Geocoding and Health" In: "Geographic Health Data: Fundamental Techniques for Analysis" (Eds. Francis Boscoe), CAB International, United Kingdom (In Review).

#### **Guest Editorships of Journal Issues from Conferences Organized by GM Jacquez**

**Jacquez**, GM 1993. Proceedings of the Workshop on Statistics and Computing in Disease Clustering, Port Jefferson, NY, 23-24 July 1992. (GM Jacquez (Editor), R.C. Grimson, L.I. Kheifets, L.A. Waller and D. E. Wartenberg (Co-editors)). Statistics in Medicine, 12 (19/20).

- Jacquez, GM** 1996 Proceeding of the Conference on Statistics and Computing in Disease Clustering, Vancouver, British Columbia, 21-22 July 1994. (GM Jacquez (Editor), R.C. Grimson, L.I. Kheifets, L.A. Waller and D.E. Wartenberg (Co-editors)). *Statistics in Medicine*, 15 (7/8/9).
- Jacquez, GM** 2002. Exposure Assessment Using High Spatial Resolution, Hyperspectral Imagery: Problems and Solutions. (eds. GM Jacquez, R. Aspinall, W. A. Marcus). *Journal of Geographical Systems*, Volume 4.
- Jacquez, GM** 2005. Space Time Intelligence Systems: Technology, Applications and Methods. (eds. GM Jacquez, P. Goovaerts, P. Rogerson). *Journal of Geographical Systems*, Volume 7.
- Jacquez, GM** 2008. Spatial Statistics for Boundary and Patch Analysis (eds. GM Jacquez, M.J. Fortin and P. Goovaerts). *Environmental and Ecological Statistics* Volume 15, Issue Number 4
- Jacquez, GM** 2010. Boundary Analysis in Epidemiology and Public Health (eds. GM Jacquez and P. Goovaerts). Special Issue of *Spatial and Spatio-Temporal Epidemiology*. Volume 1, Issue 4, epub date October 2010.
- Jacquez, GM**. 2012. Geocoding in Epidemiology and Exposure Assessment (eds. D. Goldberg and GM Jacquez). *Journal of Spatial and Spatio-Temporal Epidemiology* (In Press).

### Software and Book Reviews

- Fortin, M-J BA Thomson and GM **Jacquez**. 1990. "Surfer : for IBM PC". (software review) *Mathematical Biosciences*, Volume 98, Issue 1, February 1990, Pages 149-151.
- Jacquez, GM**. 1991. "Time Series: A Biostatistical Introduction." *The Quarterly Review of Biology*, Vol. 66, No. 3, 371. (Book Review)
- Jacquez, GM**. 2004. "Neighborhoods and Health" Eds I Kawachi and L. F. Berkman. (Book Review). *Annals of the Association of American Geographers*.

### PATENTS

Patent 6,985,829 defines a method for assessing clustering and related measures of association in geographically referenced data with multiple attributes. Patents 6,738,728, 6,704,686, 6,460,011 and 6,360,184 patent additional claims related to extensions and scope of application of the methods.

	<b>PAT. NO.</b>	<b>Title</b>
1	6,985,829	Method for measuring a degree of association for dimensionally referenced data
2	6,738,728	Method for measuring a degree of association for dimensionally referenced data
3	6,704,686	Method for measuring a degree of association for dimensionally referenced data
4	6,460,011	Method for measuring a degree of association for dimensionally referenced data
5	6,360,184	Method for measuring a degree of association for dimensionally referenced data

## **SOFTWARE (Authored by or produced under direction of GM Jacquez)**

1. Jacquez, GM. 1994. Stat! Software for the Clustering of Health Events. BioMedware Press, Ann Arbor, MI
2. Jacquez, GM, SL Maruca, D Greiling, A Kaufmann, L Muller, B Rommel, S Sengupta, P Agarwal, K Hall. 2001, 2009. BoundarySeer User Guide: Software for Geographic Boundary Analysis. TerraSeer Press, Ann Arbor, MI. 189 pp.
3. Jacquez, GM, D. Greiling, L. Estberg, E. Do, A. Long, B. Rommel. 2001, 2009. ClusterSeer User Guide: Software for Identifying Disease Clusters. TerraSeer Press, Ann Arbor, MI. 140 pp.
4. Jacquez, GM, D. Greiling, H. Durbeck, L. Estberg, E. Do, A. Long, B. Rommel. 2002. ClusterSeer User Guide 2: Software for Identifying Disease Clusters. TerraSeer Press, Ann Arbor, MI. 316 pp.
5. TerraSeer. 2008. Space-Time Intelligence System Software. TerraSeer, Inc. Ann Arbor, MI.
6. BioMedware, 2012. SpaceStat, software for the visualization, analysis, modeling and interactive exploration of spatiotemporal data. Versions 2.0 – 3.6. BioMedware, Inc. Ann Arbor, MI.

## **AWARDS AND HONORS**

2011 Best paper award at the 1<sup>st</sup> International Conference on Geospatial Geocoding, for the paper “A research agenda: Does geocoding positional error matter in health GIS studies”, Dec 2011 on the campus of ESRI.

2011 Keynote Speaker, Spatial Analysis and Modeling (SAM) Speciality Group, Association of American Geographers and *Geographical Analysis* Plenary Lecture, April 15 2011, Seattle, WA.

2008 BioMedware selected as one of only 60 companies to receive a Commercialization Assistance Award from the National Institutes of Health (NIH-CAP program). Under the Auspices of the Larta Institute, the NIH-CAP program is designed to assist some of the most promising SBIR Phase II-funded life science companies bring their technologies to market.

2007 Named “Research Pioneer in the Division of Cancer Control and Population Sciences”. Dr. Jacquez is one of 147 Investigators funded when DCCPS was formed in 1997, and who held grants on the 10th anniversary of that Division. The National Cancer Institute stated “These pioneers have helped grow and enhance cancer control and population science research over the years.”

1996 International Who's Who in Information Technology

1995 Who's Who in Science and Technology

1988 Elected Associate Member, Sigma Xi, The Scientific Research Society, Stony Brook chapter.

1987 EDUCOM Distinguished Software Award. For Ramas/a, a risk assessment and population modeling program.

1983 Elected to The Explorers Club, New York City, New York.

1983 General University Scholarship, The University of Michigan.

1977 General University Scholarship, The University of Michigan.

**RESEARCH GRANTS AND AWARDS**

**Summary (Since 1990 through 2011, NIH only, not including contracts)**

Total extramural grant funding, GM Jacquez as PI: \$ 8,213,785

Total extramural grant funding, GM Jacquez as co-PI: ~\$1,000,000 (estimated)

Total extramural grant funding for BioMedware (NIH only, subcontracts not included), GM Jacquez as President: \$11,789,139

**Grants (GM Jacquez Principal Investigator, 2012 awards not included)**

<u>Title</u> Granting Organization (Titles are hyperlinked to abstracts)	<b>Fiscal Years</b>	<b>Total Funding</b>
<u>Cancer Cluster Morphology</u>		
National Cancer Institute(NCI)	2006 - 2009	\$ 701,806
<u>Case-only Cancer Clustering For Mobile Populations</u>		
National Cancer Institute(NCI)	2008 - 2012	\$ 850,000
<u>Cancer Clustering For Residential Histories</u>		
National Cancer Institute(NCI)	2005 - 2008	\$ 850,000
<u>Space-time Clustering Of Testicular Cancer Using Residential Histories</u>		
National Institute of Environmental Health Sciences(NIEHS)	2008	\$ 170,608
<u>Space-time Technology For Reconstructing Exposure In Cancer Epidemiology Studies</u>		
National Cancer Institute(NCI)	2007	\$ 99,999
<u>Model Transition Sensitivity Analysis</u>		
National Institute of Allergy and Infectious Diseases Extramural Activities(NIAID)	2001 - 2004	\$ 856,808
<u>A Space-time Information System For The Nci Cancer Atlas</u>		
National Cancer Institute(NCI)	2001 - 2003	\$ 1,052,025
<u>Stroodle: A Gis Foundation Class Library</u>		

National Institute of Environmental Health Sciences(NIEHS)	2001 - 2002	\$ 749,784
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Simulation Algorithms For Spatial Pattern Recognition

National Cancer Institute(NCI)	2001	\$ 170,490
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Exposure Assessment Using Hyperspatial Imagery

National Institute of Environmental Health Sciences(NIEHS)	2000	\$ 102,620
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Biostatistical Methods In Environmental Epidemiology

National Cancer Institute(NCI)	1995 - 1999	\$ 697,099
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Software For Geographic Boundary Analysis

National Cancer Institute(NCI)	1997 - 1999	\$ 892,983
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Gis-tfc: A Gis Foundation Class Library

National Institute of Environmental Health Sciences(NIEHS)	1999	\$ 100,000
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Software And Statistical Methods For Uncertain Locations

National Cancer Institute(NCI)	1997 - 1998	\$ 715,617
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Disease Cluster Tests For Uncertain Health Event Data

National Cancer Institute(NCI)	1995	\$ 99,307
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Statistics And Computing In Disease Clustering (conference grant)

National Cancer Institute(NCI)	1993	\$ 10,000
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Statistical Detection Of Cancer Clusters

National Cancer Institute(NCI)	1990 - 1992	\$ 263,410
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## Recent Grants on which GM Jacquez was Co-Principal Investigator

### Title/Granting Organization

### Role

#### Space-time Clustering Of Non-hodgkin's Lymphoma Using Residential Histories

National Cancer Institute(NCI)

Subcontractor

#### Ecological Modeling Of College Drinking

National Institute on Alcohol Abuse and Alcoholism(NIAAA)

Subcontractor

#### Arsenic Exposure And Bladder Cancer In Michigan

National Cancer Institute(NCI)

Subcontractor

### Miscellaneous non-NIH grants and contracts

1991-1993 “Methods in Environmental Epidemiology”. Case studies and methods development grant from the Electric Power Research Institute.

1990-1991 “The Spatial Analysis of Hospital Admissions and Air Pollution in Ontario, Canada”. Funded by a contract from the Electric Power Research Institute.

1989 “Sources of Bias in Regressions of Lake Acid Neutralizing Capacity”. Department of Energy contract #SC922-95 from Martin Marietta.

## TEACHING

### University Courses Taught: Course title (Institution)

#### Graduate:

GEO 503 “Space-Time Analysis for Environment and Health” (SUNY Buffalo, Department of Geography). 3 credit hour graduate seminar offered Fall 2012.

SNRE 543 “Advanced Space-Time Analysis for the Environmental and Health Sciences” (University of Michigan, School of Natural Resources and Environment). This 3 credit hour graduate level course is comprised of a 2 hour lecture and 2 hour lab each week.

“Spatial Analysis of Disease Pattern and Process” (University of Michigan, Department of Epidemiology). This 3 credit hour graduate level course is comprised of a 2 hour lecture and a 2 hour lab each week. Instructors: Geoff Jacquez, Mark Wilson, Andy Long (post-doc).

### Short Courses and Workshops (Organized and/or taught by Jacquez, partial listing since 2002):

November 11-12, 2010. BioMedware, Ann Arbor, MI. “Case-Only Cancer Clustering in Mobile Populations Workshop”.

October 21-22, 2010. BioMedware, Ann Arbor, MI. "Space-Time Analysis of Health Data Workshop".  
Instructors: GM Jacquez and PE Goovaerts.

October 4-6, 2010. Alabama Department of Public Health, Montgomery, AL. "Public Health Analysis in SpaceStat". This three day course provided an introduction to mapping and cluster analysis of time-dynamic geohealth data in SpaceStat.

April 29-30, 2010. BioMedware, Ann Arbor, MI. "Cluster Morphology Analysis Workshop".

November 17, 2009, Centers for Disease Control and Prevention, Atlanta, GA. "Space-time analysis for public health". This one day course provided an introduction and overview of the STIS software and analysis approaches for CDC staff.

June 5, 2009. Providence, RI. Workshop for the URISA GIS in Public Health Conference. "Space-Time Analysis of Health Data" Instructors: Geoffrey Jacquez and Marilyn O. Ruiz.

June 22-26, 2009. University of Copenhagen. "Graduate Course in Spatial Epidemiology". This one-week course provided an in-depth overview of space-time analysis in epidemiology and public health. Instructors: Geoffrey Jacquez and Martin Jepsen.

June 2006. Two-day graduate student workshop at the GEOIDE Summer School "Space-Time Analysis". Calgary, Canada. Instructor: Geoffrey Jacquez.

May 2006. Workshop on Breast Cancer in Marin County, San Rafael, California. Organized in collaboration with Zero Breast Cancer. "The identification of areas of excess breast cancer risk in Marin County using case-control clustering for residential histories". Instructors: Geoffrey Jacquez and Gillian AvRuskin.

September 27-30, 2005. Michigan League, Ann Arbor, MI. "Advanced Spatial Analysis Workshop for Public Health".

August 1-2, 2005. Workshop for the GeoComputation Conference, Raleigh-Durham, NC. "Space-Time Analysis Workshop".

August 23-26, 2004. Michigan League, Ann Arbor, MI. "Advanced Spatial Analysis Workshop for Public Health and Biosurveillance". Instructors: Geoffrey Jacquez and Pierre Goovaerts.

November 2-5, 2004. Washington Dept of Health, Olympia, WA. "Space-Time Analysis Workshop". Instructors Geoffrey Jacquez and Richard Hoskins.

November 11, 2003. Greenhills High School Statistics Class, Ann Arbor, MI. "An Introduction to Cancer Atlas Viewer".

August 11-15, 2003. Evergreen University, WA. "Advanced Spatial Analysis Workshop for Public Health". Instructors: Geoffrey Jacquez, Richard Hoskins and Dunrie Grieling.

June 12-13, 2003. Chicago Department of Health. "Boundary and Exploratory Spatial Data Analysis". Instructors: Geoffrey Jacquez and Dunrie Grieling.

March 2003. The University of Michigan League, Ann Arbor, MI. "The Analysis of Clusters of Health Events".

April 23, 2002. University of Nebraska, Lincoln. Workshop for the Meetings of the Ecological Society of America. "Spatial Pattern Analysis: Introduction to BoundarySeer and ClusterSeer".

March 2002. The University of Michigan League, Ann Arbor, MI. "The Analysis of Clusters of Health Events".

### **Post-Doctoral Supervision: Name (Years, Location, Funding Source), Current Position**

- (1) Andy Long (1998 to 2000, BioMedware and UM-Ann Arbor, NIH), Associate Professor, Department of Mathematics, Northern Kentucky University
- (2) Leah Estberg (1998 to 2000, BioMedware, NIH), Business Analyst, Fort Collins, Colorado
- (3) Niels Liebisch (2002 to 2003, BioMedware, NIH), Senior Engineer, Environmental Consulting and Analysis, Inc. Ann Arbor, MI
- (4) Jaymie Meliker (2007 to 2009, BioMedware, NIH), Assistant Professor, Department of Preventive Medicine, School of Medicine, State University of New York at Stony Brook

### **Graduate Dissertation Committees (as external examiner):**

PhD                      Graduated (2)                      Sitting (1)

Jaymie R. Meliker, 2006, *Lifetime Exposure to Arsenic in Drinking Water in Southeastern Michigan: Application to a Bladder Cancer Case-Control Study*, Environmental Health Sciences, The University of Michigan.

Tsung-Wen Kuo, 2007, *Assessing the use of Partnership Data in Gonorrhea Control with Computer Simulation*, Department of Epidemiology, The University of Michigan.

### **SEMINARS AND PRESENTATIONS (partial listing Since 2005)**

Particularly noteworthy **shown in bold**

- 2005    Speaker, “Case control clustering for residential histories”, Association of American Geographers, 2005 Annual Meeting, Denver, Colorado. March 2005.
- 2005    Speaker, “Case control clustering for mobile populations: Methods for chronic and infectious diseases”, Geocomputation 2005, The University of Michigan, Ann Arbor, Michigan. Session Chair and Conference program committee member. August 2005.
- 2005    Speaker, “Accounting for covariates when evaluating clusters using residential histories”, Workshop on Simulation Algorithms for Spatial Pattern Recognition, BioMedware, Inc. The Michigan League, Workshop organizer. August 2005.
- 2005    Invited Speaker, “Global, local and focused tests for clustering residential histories”. Workshop on Digital Governance and Hotspot Geoinformatics, organized by GP Patil, Penn State University, College Park, Pennsylvania, Nov 2005.
- 2006    Speaker, “Case-control clustering for residential histories accounting for covariates and risk factors”. Association of American Geographers, 2006 Annual Meeting. Chicago, Illinois, March 2006
- 2006    Workshop organizer and presenter “The identification of areas of excess breast cancer risk in Marin County using case-control clustering for residential histories”. Workshop on Breast Cancer in Marin County, San Rafael, California. Organized in collaboration with Zero Breast Cancer. May 2006.
- 2006    Invited speaker and workshop leader. “Bladder Cancer in Michigan – Identification of Clusters using Residential Histories”. 2-day graduate student workshop at the GEOIDE Summer School. Calgary, Canada. June 2006.

- 2006 Co-author of paper presented by Dr. Jaymie Meliker. “Geographic Clustering of Cases and Controls Over the Life-Course: Accounting for Risk Factors, Covariates and Latency”. International Society for Environmental Epidemiology and Exposure Assessment Annual Meetings. Paris, France, August 2006.
- 2006 **Invited speaker “Private Sector Geographic Information Science Research at BioMedware”. The National Academies of Sciences, Committee on the Research Priorities for the USGS Center for Excellence for Geospatial Information Sciences.** Washington DC, October 2006.
- 2006 **Invited speaker “Accounting for residential mobility, covariates and risk factors in geographic case-control studies of cancer”. Miami Cancer Center,** Miami Florida, December 2006.
- 2007 Invited Speaker, “Accounting for Residential Mobility, Covariates and Risk Factors in Geographic Case-Control Studies of Cancer”, Department of Geography, Oregon State University. Eugene Oregon, February 2007.
- 2007 Speaker, “Detecting space-time cancer clusters using residential histories”, Special Session on Predictive Analytic Modeling at the SPIE International Symposium on Defense and Security. Orlando Florida, April 2007.
- 2007 **Invited Speaker, “The perils of pareidolia: Big problems and some solutions in medical geography”. International Workshop on Digital Governance and Hotspot Geoinformatics. Penn State University,** College Park, Pennsylvania, May 2007.
- 2007 **Invited Speaker, “The perils of pareidolia: Big problems and some solutions in medical geography”. 3rd Annual GIS & Public Health Day - GIS and Cancer. The University at Albany School of Public Health, Sponsored by the American Cancer Society and the New York Department of Health.** Albany, New York, May 2007.
- 2007 Co-author on paper presented by Dr. Jaymie Meliker “Geospatial Analyses of Cancer Incidence and Control”. Michigan Department of Community Health, Michigan Cancer Registry. Lansing Michigan, May 2007.
- 2007 **Invited Speaker and Session Chair, “Big Problems in the Spatial Epidemiology of Cancer: Human Mobility, Empirical Induction Period and Time”. StatGIS 2007, Klagenfurt, Austria.** September 2007.
- 2007 **Invited Speaker, “Big Problems in the Spatial Epidemiology of Cancer: Human Mobility, Empirical Induction Period and Time”, Visiting Scholars Seminar Series of the Epidemiology and Genetics Research Program at the National Cancer Institute.** Rockville, Maryland, October 2007.
- 2007 Co-author on the Invited Presentation “Space-Time Information System Technology for Environmental Health Research (presented by Dr. Jaymie Meliker)”. Geospatial Technologies & Public Health Conference, Texas A&M University, November 2007.
- 2008 **Invited Speaker, “The Grand Challenge in Medical Geography”, National Research Council subcommittee on Strategic Directions for the Geographical Sciences in the Next Decade,** held at The Annual Meetings of the Association of American Geographers. Boston, April 2008.
- 2008 Co-Author on paper presented by Gillian AvRuskin. “Accounting for Covariates in a Spatial Temporal Analysis of Breast Cancer in Marin County, CA”. Annual Meetings of the Association of American Geographers. Boston, April 2008.

- 2008 Co-author on paper presented by Jaymie Meliker. "Space-time clustering of bladder cancer cases and controls using residential histories: Insights into empirical induction periods and age-specific susceptibility." Annual Meetings of the Association of American Geographers. Boston, April 2008.
- 2008 Presenter and session co-organizer "Tests for Space-Time Interaction in Cancer Cases Accounting for Residential Mobility, Empirical Induction Period, Covariates and Risk Factors". Annual Meetings of the Association of American Geographers. Boston, April 2008.
- 2008 **Invited Speaker, "Methodological and logistical problems in disease clustering", Conference on The Investigation of Disease Clusters at the DIMACS Center at Rutgers University, Piscataway, NJ, May 2008.**
- 2008 Invited Participant "Barriers to the Development of User-Friendly, Well-Tested Software for Cutting Edge Statistical Methodology" held at the National Cancer Institute, May 2008.
- 2008 Speaker "Recent advances in the cluster analysis of individual-level data accounting for residential mobility, covariates and risk factors". Geostatistical Analysis of Geocoded Data & Health Disparities Workshop, BioMedware, Ann Arbor, MI, June 2008.
- 2008 **Invited Speaker "Problems and Some Solutions in the Analysis of Geospatial Data". National Geospatial Intelligence Agency, Reston Virginia, June 2008.**
- 2008 **Invited Speaker "Evaluation of clusters of disease accounting for residential mobility, covariates, known risk factors, and proximity to industry", GISA (Gestao Integrada de Saude e Ambiente – Integrated Management of Health and Environment), Lisbon Portugal, September 2008.**
- 2008 **Invited Speaker "The Future of Space-Time Statistics", Workshop on spatiotemporal analysis and statistical modeling, GIScience 2008 Fifth International Conference on Geographic Information Science, Park City Utah, September 2008.**
- 2008 Invited Speaker "Accounting for Residential Mobility in Studies of Cancer", special session on space-time geostatistics, 2008 Joint Annual Conference International Society for Environmental Epidemiology and International Society for Exposure Assessment, Pasadena, CA, October 2008
- 2008 Invited Speaker "Cancer Cluster Morphology", Invited seminar series at the Geography Department at the University of California, Santa Barbara, October 2008
- 2008 Co-author on the paper presented by Jaymie Meliker "Space-time clustering of bladder cancer cases and controls using residential histories: Insights into empirical induction periods and age-specific susceptibility", Danish Cancer Society Symposium, Copenhagen Denmark, October 2008.
- 2009 **Invited Speaker, "Geotechnologies Research at BioMedware" StratAG Spatial Algorithms Meeting, NUI Maynooth, Ireland. Hosted by S. Fotheringham. January 2009.**
- 2009 Invited Speaker, "Geotechnologies Research at BioMedware", Cooperative Research Centres for Spatial Information, Department of Public Health, Perth Australia, February 10 2009.
- 2009 **Invited Speaker, "An International Perspective on the Cooperative Research Centres for Spatial Information (CRCSI) Health Theme", Health CRCSI Workshop, Canberra, Australia. February 12 2009.**
- 2009 **Co-author and discussant on the presentation by Justin Holman "BioMedware Business Case Presentation", National Institutes of Health Commercialization Assistance Award Program (NIH-CAP), The LARTA Institute, Los Angeles, CA. February 15 2009. (BioMedware NIH-CAP 2009 Awardee)**

- 2009 Speaker “Participants Perspective: Using the Space-Time Intelligence System software for Exposure Reconstruction”, Space-Time Exposure Reconstruction Workshop, BioMedware, Ann Arbor, MI. June 1-2, 2009.
- 2009 Co-author on the paper presented by Jawaid Rasul “Drinking Age and Misperception: Modeling Legal and Underage Drinkers in SimHED”, in the Special Session organized by Richard Scribner *Forecasting the Effect of Lowering the Minimum Legal Drinking Age: A Systems Approach to College Drinking*, Annual Meeting of the Research Society on Alcohol, San Diego, CA, June 24 2009.
- 2009 Co-author on the invited paper by H Cullings, G Jacquez, A Lawson, and GP Patil “Hiroshima Nagasaki Atomic Bombing Radiation Effects Hotspot Biogeoinformatics” in the 2009 Joint Statistical Meetings Invited Program “Digital Governance, Hotspot Geoinformatics, Knowledge Discovery, and Public Policy” August 2009.
- 2009 Co-author on the presentation by Jaymie R. Meliker “A Monte Carlo Simulation Method for Incorporating Individual-Level Error in Exposure into Epidemiologic Analyses”, International Society for Environmental Epidemiology and Exposure Assessment, Dublin, Ireland. August 2009.
- 2009 Session co-organizer (with Dan Wartenberg, lead organizer) and co-author on two presented papers in addition to the above, “The Impact of Residential Mobility on Environmental Epidemiology Studies” International Society for Environmental Epidemiology and Exposure Assessment, Dublin, Ireland. August 2009.
- 2009 Co-author on the paper presented by Jaymie R. Meliker “Incorporating individual-level uncertainties in exposure into epidemiologic analyses: An example using arsenic in drinking water and bladder cancer”. American Public Health Association 137th Annual Meeting, Philadelphia, Nov 7-11, 2009.
- 2009 Co-author on the paper presented by Jaymie R. Meliker “Spatial cluster analysis of early stage breast cancer: A method for public health practice using cancer registry data.” American Public Health Association 137th Annual Meeting, Philadelphia, PA, Nov 7-11, 2009.
- 2009 Co-author on the paper presented by Jaymie R. Meliker. “Lifetime exposure to arsenic in drinking water and bladder cancer: A population-based case-control study in Michigan.” American Public Health Association 137th Annual Meeting, Philadelphia, PA, Nov 7-11, 2009.
- 2009 **Invited Speaker “Local Indicators of Geocoding Accuracy (LIGA): A new visualization tool for identifying locations that need to be geocoded most accurately”.** GEOMED/SAMSI 2009, Charleston SC, November 14–16, 2009.
- 2009 **Plenary Presentation “Key Problems and Some Solutions in Geospatial Health Analysis” Centers for Disease Control and Surveillance GIS-day**, Atlanta GA, November 2009.
- 2009 Speaker “Boundary Analysis: An Introduction”, Geographic Boundary Analysis Workshop, BioMedware, Ann Arbor, MI. December 2009.
- 2009 Speaker and co-organizer, “Geographic Clustering of Breast Cancer among Long-Term Residents of Marin County, California Accounting for Residential Mobility, Risk Factors and Covariates”. In collaboration with Peggy Reynolds (NCCC) and Janice Barlow (Director, Zero Breast Cancer) Northern California Cancer Center, Berkely, CA, Dec 23, 2009.
- 2010 **Speaker, “Geographic Complex Systems Analysis”, 2010 Space-Time Modeling and Analysis Workshop, University at Redlands hosted by ESRI**, Redlands, CA, February 2010.
- 2010 Invited Speaker, Department of Geography, State University of New York at Buffalo, February 17, 2010.

- 2010 Invited Speaker, Department of Geography Colloquium, University of Utah, Salt Lake City. March 5, 2010.
- 2010 Speaker, “Space-Time Intelligence System Software for the Analysis of Complex Geographic Systems”, Annual Meetings of the Association of American Geographers, Washington DC, April 2010.
- 2010 Co-author on the paper presented by Chantel Sloan “Performance of Cancer Cluster Q-Statistics for Case-Control Residential Histories”, Annual Meetings of the Association of American Geographers, Washington DC, April 2010.
- 2010 Co-author on the paper presented by Jaymie Meliker “Performance of Q-statistics for investigating cancer clusters in case-control residential histories”, Annual Meetings of the Association of American Geographers, Washington DC, April 2010.
- 2010 Speaker, “Residential Mobility, Cancer and Local Indicators of Geocoding Accuracy”, Section on Statistics and the Environment, 2010 Joint Statistical Meetings, Vancouver, Canada. August 5 2010.
- 2011 **Invited Speaker “The Interface of Geographic Information Science and Health Research”, AAG Initiative for an NIH-Wide Geospatial Infrastructure Workshop**, Rockville, MD, February 22-23 2011.
- 2011 **Plenary Presentation, “Key problems and some solutions in geospatial health analysis”, Spatial Analysis and Modeling Specialty Group, The Association of American Geographers Annual Meeting, Seattle, WA. April 2011.**
- 2011 Co-author on the paper presented by Jaymie Meliker “Performance of cancer cluster Q-statistics for case-control residential histories: Simulation analyses using US and Danish studies”, Spotlight Session at the 3rd North American Congress of Epidemiology, Montreal, Canada, June 21-24, 2011.
- 2011 Speaker “Residential mobility and breast cancer in Marin County, California”, ICA and ISPRS Workshops, Simon Fraser University, The Halpern Centre, Canada. August 10-12, 2011. Also Chair of Session 1-3 : Spatial Patterns.
- 2011 Co-author on the paper presented by Chantel Sloan, presented by Jaymie Meliker. “Assessing performance of Q-statistics for identifying cancer clusters in residential histories using simulated clusters in US and Danish case-control studies”, 139<sup>th</sup> American Public Health Association Annual Meeting, Washington, DC. October 29- November 2, 2011.
- 2011 CD Sloan, GM Jacquez, CM Gallagher, MH Ward, R Baastrup Nordsborg, O Raaschou-Nielsen, JR Meliker, presented by Jaymie Meliker “Searching for Cancer Clusters in Case-Control Residential Histories of Non-Hodgkins Lymphoma and Testicular Cancer”, GeoMed Conference, October 2011, Victoria, BC.
- 2011 **Speaker and organizing committee member of the First Conference on Geocoding in Public Health**, December 11 in Redlands, CA. (with funding from ESRI, CDC, and NIH; Dan Goldberg program lead).
- 2012 Invited Speaker, “Geohealth Analysis and Data Visualization: Assessing and demonstrating relationships between dynamic local environments and human health outcomes”. Population Health Data Analysis: From Infrastructure to Innovation Conference and Workshops, Vancouver, BC, Canada. February 8-10 2012.
- 2012 Invited Speaker, special session on Spatial Uncertainty and Health Analysis, organized by Zaria Tatalovich, Ph.D., (Acting) Chief, Surveillance Systems Branch Surveillance Research Program,

- Division of Cancer Control and Population Sciences National Cancer Institute. Annual Meetings of the Association of American Geographers, New York City, NY. February 24-28 2012.
- 2012 CD Sloan, G Jacquez, R Bastrup-Nordsborg, O Raaschou-Nielsen, J Meliker\*. “Searching for Cancer Clusters in Case-Control Residential Histories of Testicular Cancer in Denmark” Annual Meetings of the Association of American Geographers, New York City, NY. February 24-28 2012.
- 2012 Invited Speaker, special session “Spatial Uncertainty in Public Health Problems”, organized by Li Zhu, Ph.D., Mathematical Statistician & Program Director, Statistical Methodology and Applications Branch, Surveillance Research Program, Division of Cancer Control and Population Sciences, National Cancer Institute. ENAR, International Biometric Society 2012 Spring Meeting, Washington, DC, April 1-4, 2012.
- 2012 K Conlon, S Maxwell, R Rommel, N Sampson, G Jacquez, M O’Neill. “Communicating heat-health vulnerability in preparation for heat events: Development and assessment of Internet-based heat evaluation and assessment tool (I-HEAT)”. International Society for Epidemiology and Exposure Assessment (ISEE) Annual Meetings, Rio de Janeiro, June 16-19 2012.
- 2012 Invited Keynote. GM Jacquez. “Finding Patterns on Maps and How Mobility Affects Those Patterns”. 1<sup>st</sup> Annual Western New York Health Geography and Geographic Information Systems (GIS) Day: Why Geography Matters for a Healthy Western New York, Buffalo, NY, August 15 2012.
- 2012 K Conlon, S Maxwell, R Rommel, N Sampson, G Jacquez, M O’Neill. “Internet-based heat evaluation and assessment tool (I-HEAT): Development and assessment of a public health application for decision-making in response to heat events.” Science Symposium on Climate and Health, CDC Global Communications Center Auditorium DLA - Building B3, Sept 12-13 2012.
- 2012 Invited Panelist. “Space-Time Research in GIScience” GIScience 2012, Columbus, Ohio, September 18-21, 2012
- 2012 Invited Speaker “Research directions in medical geography” Cryptography, Internet-based heat surveillance, and genetic GIS”. Texas A&M Geography Department Seminar Series, College Station, Texas, October 12, 2012.
- 2012 K Conlon, S Maxwell, R Rommel, N Sampson, G Jacquez, M O’Neill. “Internet-based heat evaluation and assessment tool (I-HEAT): Development and assessment of a public health application for decision-making in response to heat events. American Public Health Association Annual Meetings, San Francisco, CA, October 27-31, 2012.

## **SERVICE**

### **Proposal Study Sections, Committees**

- 1997 Temporary Advisor on Disease Mapping, World Health Organization, Rome.
- 1999 NIH/NCI Reviewer Special Study Section on Geographic Variation in Breast Cancer
- 2000–2002 Spatial Data Standards Committee, the Association of American Geographers
- 2001-2002 Industry Liaison, GIS Specialty Group, the Association of American Geographers
- 2001 NIH/NCI Special Study Section on Geographic Epidemiology and the National Cancer Atlas

2002-2003 Consultant, NCI specialty group “Best Practices in the Spatial Analysis of Cancer Data”

2003 NIH/NCI Reviewer SEP ZCA1 SRRB-K “Clinical Trials Data Collection Using Hand-Held Technology”

2003 CDC/ATSDR Reviewer PEP 2003-052, “Develop Methods and New Approaches for Evaluating Environmental Exposure and Human Health Risks In Small Populations”

2003 NIH/NCI Reviewer EDC-2 Epidemiology of Cancer (EPIC) Study Section

2003-2005 Ad-Hoc NSF Reviewer, Methodology, Measurement, and Statistics Program

2004 NIH/NCI Reviewer SEP/IRG 2004/05 EPIC Study Section

2004 NIH/NCI Reviewer SBIR 181 “Clinical Trials Data Collection Using Hand Held Technology” Special Study Section

2005 Program Committee, GeoComputation 2005

2006 Instructor, GEOIDE Summer School, University of Calgary, Alberta

2006 Invited Speaker, National Academy of Sciences, Center of Excellence in GIScience, Washington DC

2006-07 Scientific Committee, geoENV 2006 – 6th International Conference on Geostatistics for Environmental Applications

2007-08 Member, Mel Marcus Fund Committee, Association of American Geographers

2008-09 Chair, Mel Marcus Fund Committee, Association of American Geographers

2010 NIH Reviewer ZRG1, Kidney, Nutrition, Obesity and Diabetes Study Section [KNOD] Population Sciences and Epidemiology (PSE) Integrated Review Group.

## Professional

*Editorial* Editorial Board, *Journal of Geographical Systems*, 2004 to present.

Founding member, Editorial Board, *Journal of Spatial and Spatio-Temporal Epidemiology*, 2009.

Editorial Board, *Journal of Spatial and Spatio-Temporal Epidemiology*, 2009 to present.

*AAG Service* Member, Spatial Data Standards Committee, the Association of American Geographers 2000-2002

Industry Liaison, GIS Specialty Group, the Association of American Geographers, 2001-2002

Book Reviewer for the Annals of the Association of American Geographers “Neighborhoods and Health” Eds I Kawachi and L. F. Berkman. 2004

Founding Member, Mel Marcus Fund Committee, Association of American Geographers, 2006

Member, Mel Marcus Fund Committee, Association of American Geographers, 2007-2008

Chair, Mel Marcus Fund Committee, Association of American Geographers, 2008-2009.

Reviewer, 2011 Jacques May Thesis Prize, Medical Geography Specialty Group, Association of American Geographers.

*Journal Article  
Reviewer*

American Journal of Public Health; Annals of the Association of American Geographers; Biometrics; BMC Infectious Diseases; BMC Public Health; Computational Statistics and Data Analysis; DataCritica: Diseases of Aquatic Organisms; Ecology; Environmental and Ecological Statistics; Environmental Health; Environmental Health Perspectives; European Food Safety Authority Journal; Gender Medicine; Geographical Analysis; Geoinformatica; Journal of Geographical Systems; International Journal of Critical Statistics; International Journal of Geographical Information Science; International Journal of Health Geographics; Landscape Ecology; Letters in Spatial and Resource Sciences; Mathematical BioSciences; Mathematical Geosciences; National Birth Defects Prevention Network Annual Report; Quarterly Review of Biology; Social Science and Medicine; Statistics in Medicine; Spatial and Spatio-temporal Epidemiology; Stochastic Environmental Research & Risk Assessment; Technology & Health Care; Theoretical Ecology; Transactions in GIS

*Conference/  
Session  
Organization*

Organized or co-organized the workshops in the earlier section “Workshops and Short Courses”, as well as the conferences that resulted in the special journal issues listed in the section “Guest Editorships of Journal Issues from Conferences Organized by GM Jacquez”.

Co-chair with Dan Wartenberg (lead organizer) of the Session “The Impact of Residential Mobility on Environmental Epidemiology Studies”, 2009 Meeting of the International Society for Epidemiology and Exposure Assessment, Dublin, Ireland, February 2009.

Member, organizing committee of the First Conference on Geocoding in Public Health, to convene December 11, 2011 in Redlands, CA (with funding from ESRI, CDC, and NIH; Dan Goldberg project lead).

*Professional  
memberships*

Association of American Geographers; American Statistical Association; Society for Environmental Epidemiology and Exposure Assessment; North American Association of Cancer Registries; American Public Health Association;